

REMARKS

Claims 1-41 are pending in the instant application. Claims 1, 9, 25 and 32 have been amended and a new claim 42 has been added. The specification has been amended to recite certain trademarks in accordance with US patent practice. Additionally, the specification and drawings (Figures 5, 6 and 7) have been amended to comply with 37 CFR 1.84(p)(5) and 37 CFR 1.84(c). Suitable replacements are included herein for the noted Figures in accordance with 37 CFR 1.21(d). No new matter has been added by virtue of these amendments; support therefor can be found throughout the specification and in the original claims of the application. Moreover, the amendments relate, in large part, to correction of mere informalities.

Applicants appreciate the indication of allowable subject matter, i.e., that claims 1-41 would be allowable if rewritten or amended to overcome the rejections under 35 U.S.C. §112, second paragraph.

As an initial matter, the Office Action notes that no Information Disclosure Statement (IDS) has been filed for the application to date. Accordingly, an IDS is filed concurrently herewith. It is requested that each of the cited documents be considered and entered onto the record for the present application.

The Office Action objects to the original drawings as allegedly failing to comply with 37 CFR 1.84(p)(5). It is asserted that Figure 6, for example, does not show appropriate reference signs referred to in the specification. The Office Action also objects to the drawings under 37 CFR 1.83(a) in that certain feature(s) recited in the claims are allegedly not depicted. Specifically, it is alleged that the sealant encapsulating the periphery must be shown in the figures.

Applicants submit herewith suitable replacement drawing sheets in compliance with 37

P. Sabin, et al.
U.S.S.N. 10/789,385
Amendment
Page 13

CFR 1.121(d). It is noted that the original informal drawings for Figures 5, 6 and 7 were photographs. The replacement sheets submitted herewith also are photographs. The quality of the photos has been improved such that certain features of the invention are now more clearly depicted by these Figures.

The replacement sheet of Figure 6 shows the external manifold 80, as well as the three ports (82), and the primary manifold (84). The replacement sheet of Figure 5 shows an assembled and sealed fuel cell stack, wherein plates 44, 46, 48, and 50, and external manifolds 80, are encapsulated about the periphery thereof by the external sealant 86. Descriptive text has been inserted into the specification at page 16, line 15, in order to reference and depict the sealant feature 86. Ample support for this amendment is evident in the application, claims and figures as originally filed. Reference character 86 was merely introduced to clearly depict the sealant encapsulating the periphery of the assembled fuel cell.

The Office Action objects to the specification for not capitalizing registered trademarks where they appear in the present application. Particular attention is directed to use of the trademarks Silastic T2 (page 21, line 24), Tygon (page 16, line 28), and Teflon (page 16, line 28). The Office Action indicates that these terms should be capitalized wherever they appear and be accompanied by their respective generic terminology. Applicants have amended the present application to capitalize these terms and incorporate the generic terminology. The products associated with each of the noted trademarks are well known in the art. Withdrawal of the objection is therefore requested.

The specification is further objected to in that it incorporates 'essential material', e.g., by reference to a world publication. The Office Action indicates that that the Applicants are required to amend the disclosure to include the material incorporated by reference.

Applicants respectfully disagree with the categorization of the material to be incorporated by reference as “essential”. The documents listed in the background of the application at pages 5-6, correspond to Applicants’ other patent applications in this field. As such, they provide non-essential information for the purposes of indicating the background of the invention and illustrating the state of the art.

All material essential to describing the claimed invention, for providing an enabling disclosure and describing the best mode are disclosed in the present specification. Applicant respectfully requests that the objection therefore be withdrawn.

The Office Action objects to claims 32-41 as being in improper multiple dependent form. Applicants have amended claim 32, such that it no longer recites a multiple dependency. The objection is thus obviated and Applicants respectfully request its withdrawal.

Claims 1-41 stand rejected under 35 U.S.C. §112, second paragraph, for various informalities. Applicants have amended the claims to address each of these informalities. For instance, claim 1 has been amended as suggested in the Office Action to recite “at least one oxidant external manifold and “at least one reductant external manifold”. Claims 1 and 9 have been further amended to correct instances of lack of antecedent basis in connection with the former recitation of “the one or more MEA”.

With particular reference to claim 9, the term “composite” has been removed for its lack of antecedent basis. Rather, the “composite MEA” feature is now recited in new claim 42. Support for the “composite MEA” feature of the invention can be found at least on pages 8 and 9 of the specification, where it is indicated that conventional MEAs are suitable for use in the fuel cell stacks of the present invention, and composite MEAs are suitable for use in the cells of the present invention without additional modification. Preferred composite MEAs of the invention

P. Sabin, et al.
U.S.S.N. 10/789,385
Amendment
Page 15

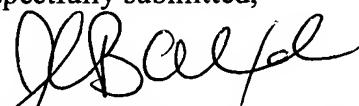
are described on page 19 of the specification as comprising a laminated membrane electrode assembly including membrane, catalyst layers and gas diffusion layers.

Lastly, claim 25 has been amended to recite the trademark/trade name Tygon as "TYGON" together with its generic name polyvinyl chloride (PVC).

As amended, the claims of the application clearly define the features of the present invention and fully satisfy the requirements of §112, second paragraph. Withdrawal of each of the aforementioned rejections is therefore requested.

It is believed the application is in condition for immediate allowance, which action is earnestly solicited.

Respectfully submitted,


John B. Alexander, Ph.D. (48,399)
Christine C. O'Day (Reg. 38,256)
EDWARDS & ANGELL, LLP
P.O. Box 55874
Boston, MA 02205
Tel. (617) 439-4444

May 6, 2005

P. Sabin, et al.
U.S.S.N. 10/789,385
Amendment
Page 11

Amendments to the Drawings:

Kindly replace Figures 5, 6 and 7 with the enclosed Replacement Sheets.